

SECTION 11

PLAN REVIEW, APPROVAL, CONSTRUCTION, AND ACCEPTANCE OF WATER AND WASTEWATER IMPROVEMENTS

11.1 PLANS AND SPECIFICATIONS

11.1.1 GENERAL

All submitted plans shall be standard size sheet (30" x 42", 24" x 36" or 11" x 17") with title block. Graphic scale(s) shall be provided on each sheet and all lettering shall be one-eighth (1/8) inch or larger to permit photographic reproduction. Submittal of specifications will only be required when special facilities outside the scope of this MANUAL are proposed. ALL PLANS sheets and the title page of submitted specifications must be signed, sealed and dated by the DEVELOPER's ENGINEER.

11.1.2 MASTER PLAN

Whenever possible, the entire water and wastewater systems shall be shown on a single Master Plan. The Master Plan shall indicate the general locations of all mains, manholes, valves, hydrants, services and service laterals with respect to the proposed development improvements and the existing water and wastewater systems. Main sizes shall be indicated in the Master Plan.

11.1.3 PLAN AND PROFILE

All gravity sewers, all wastewater force mains, and off-site water mains shall be drawn in plan and profile. On-site water mains may be shown in plan view only.

Whenever possible, on-site water and wastewater systems shall be shown on the same PLANS sheet. As a minimum, the plan and profile drawings shall include the following information:

- a. General information such as north arrow, names of designer and engineer, revision block with dates, graphic scale(s) and sheet number.
- b. Profile with elevations at one hundred (100) foot interval, or more frequently if required by good design practice.
- c. Development layout with horizontal and vertical controls.
- d. All conflicts with other utility and drainage systems.
- e. All manhole locations and rim elevations for manholes outside of paved areas.

- f. Pipe data including size, lengths, material, and slopes.
- g. Size, type, and locations of fittings, valves, hydrants, air release/vacuum relief, and other related appurtenances.
- h. Limits of pipe deflection.
- i. Limits of special exterior coatings.
- j. Limits of special bedding requirements.
- k. Pipe restraint requirements.
- l. Details of connection to existing systems.
- m. Locations(s) and general layout of wastewater pumping stations.
- n. Construction notes regarding cover, horizontal and vertical control, special construction requirements, and references to standard and special details.

11. 1. 4 DETAILS

The PLANS shall include all applicable STANDARD DRAWINGS as shown in Part 3 of this MANUAL. Special details shall be prepared by the DEVELOPER's ENGINEER for aerial and underwater crossings of rivers, streams, canals and ditches. Other special details shall be prepared by the DEVELOPER's ENGINEER as required.

11. 1. 5 SCALE

The master plan shall be prepared at a scale not to exceed one (1) inch to two-hundred (200) feet. Plan and profile sheets shall not exceed a scale of one (1) inch to fifty (50) feet. Special details shall be of sufficiently large scale to show pertinent construction information.

11. 2 SUBDIVISION RELATED WATER AND WASTEWATER IMPROVEMENTS

11. 2. 1 GENERAL

This section covers all water and wastewater improvements that are dedicated to the City of Mascotte and constructed in compliance with the City of Mascotte Subdivision Regulations.

11. 2. 2 DESIGN AND PLAN REVIEW

Design of water and wastewater improvements associated with City of Mascotte approved subdivisions shall be in compliance with the design standards in Division II, and the specification outlined in Divisions III, IV, and V of this MANUAL. PLANS will be reviewed and approved by the City of Mascotte Utilities Department as part of the subdivision review and approval process. Refer to the City of Mascotte Subdivision Regulations for other requirements governing plan review and approval.

11. 2. 3 CONSTRUCTION INSPECTION

Inspection of improvements shall be in accordance with criteria established in the City of Mascotte Subdivision Regulations. The DIRECTOR or his designated representative shall inspect the water and wastewater improvements to ensure their compliance with requirements in Divisions II, III, IV and V of this MANUAL.

11. 2. 4 APPROVAL AND ACCEPTANCE

Approval and acceptance of water and wastewater improvements shall be in accordance with the criteria established in the City of Mascotte Subdivision Regulations and this MANUAL.

11. 3 WATER AND WASTEWATER IMPROVEMENTS ASSOCIATED WITH THE CITY OF MASCOTTE SITE DEVELOPMENT ORDINANCE

11. 3. 1 GENERAL

This section covers all water and wastewater improvements that are constructed in compliance with the City of Mascotte Site Development Ordinance as amended and are to be dedicated to the City of Mascotte. Such water and wastewater improvements shall be designed, reviewed, constructed and accepted in accordance with the criteria established in Section 11.3 herein.

11. 3. 2 DESIGN AND PLAN REVIEW

Design of water and wastewater improvements shall be in compliance with the design standards in Division II and the specifications outlined in Divisions III, IV and V of this MANUAL. PLANS will be reviewed and approved by the Utilities Department as part of the Commercial Site Plan review process.

11. 3. 3 CONSTRUCTION INSPECTION

The DIRECTOR or his designated representative(s) shall periodically inspect all construction subject to these standards and specifications. After all required improvements have been installed, the DEVELOPER's ENGINEER shall submit certification to the CITY that the improvements have been constructed substantially according to approved plans and specifications. Non-compliance

with approved plans or specifications or evidence of faulty materials or workmanship shall be called to the attention of the DEVELOPER or DEVELOPER's ENGINEER and if not corrected in an expeditious manner, all work on the project will be suspended and/or certificate of occupancy withheld. Laboratory tests may be required when appropriate.

**11. 3. 4 MAINTENANCE, MATERIALS, AND WORKMANSHIP
 WARRANTY BOND**

A bond shall be posted by the DEVELOPER and executed by a company authorized to do business in the State of Florida that is satisfactory to the CITY, payable to the City of Mascotte in the amount of ten (10) percent of the estimated construction cost of all required water and wastewater improvements to be owned and maintained by the CITY. Such bond shall guarantee maintenance of all improvements intended to be owned and maintained by the CITY for a two (2) year period, and the materials, workmanship and structural integrity of water and wastewater systems, and miscellaneous related facilities, excluding mechanical equipment for a two (2) year period, commencing after a Certificate of Completion has been issued by the CITY. See Appendix C for required forms. The manufacturer's warranty will be acceptable for mechanical equipment. As an alternative to the provision of a surety bond, the DEVELOPER may provide for the deposit of cash in an escrow account or a letter of credit acceptable to the CITY.

**11. 3. 5 CERTIFICATE OF COMPLETION
 APPROVAL FOR COMPLETION**

After successful completion of all water and wastewater improvements, and after receipt of the required documents outlined in Appendix C, page C-3, the CITY will provide a "Certificate of Completion" verifying the satisfactory construction of all improvements intended to be owned and maintained by the CITY. After the one (1) year Warranty Period and verification by the CITY of satisfactory performance of all water and wastewater improvements, the CITY will issue the "Approval for Maintenance", thereby releasing the DEVELOPER from further responsibilities. See form on page C-4 in Appendix C.

**11. 4 MISCELLANEOUS WATER AND WASTEWATER
IMPROVEMENTS**

All water and wastewater improvements constructed which are intended to be owned, operated or maintained by the CITY, excluding the improvements discussed in Sections 11.2 and 11.3 hereinabove, shall be designed, reviewed, inspected and accepted in strict compliance with the criteria established in Section 11.3 hereinabove.

**11. 5 COMPLIANCE WITH OTHER REGULATORY
REQUIREMENTS**

It shall be the responsibility of the DEVELOPER to obtain and comply with all applicable Federal, State and Local regulatory permits.

11.6 RECORD DRAWINGS

The DEVELOPER's ENGINEER shall submit two certified sets of Record Drawings to the CITY prior to issuance of Certificate of Completion for the improvements. The DEVELOPER's ENGINEER shall be responsible for recording information on the approved PLANS concurrently with construction progress. Record Drawings submitted to the CITY as part of the project acceptance shall comply with the following requirements:

1. Drawings shall be legibly marked to record actual construction.
2. Drawings shall show actual location of all underground and above ground water and wastewater piping related appurtenances. All changes to piping location including horizontal and vertical locations of utilities and appurtenances shall be clearly shown and referenced to permanent surface improvements. Drawings shall also show actual installed pipe material, class, etc.
3. Drawings shall clearly show all field changes of dimension and detail including changes made by field order or by change order.
4. Drawings shall clearly show all details not on original contract drawings but constructed in the field. All equipment and piping relocation shall be clearly shown.
5. Location of all manholes, hydrants, valves, and valve boxes shall be shown. All valves shall be referenced from at least two and preferably three permanent points.
6. Dimensions between all manholes shall be field verified and shown. The inverts and grade elevations of all manholes shall be shown.

Each sheet of the PLANS shall be signed, sealed and dated by the DEVELOPER's ENGINEER as being "As-Built" or "Record Drawings". Construction PLANS simply stamped "As-Built" or "Record Drawings" and lacking in above requirements will not be accepted, and will be returned to the DEVELOPER's ENGINEER. The "Certificate of Completion" will not be issued until correct "Record Drawings" have been submitted.

11.7 LIST OF MATERIALS AND APPROVED MANUFACTURERS

A list of Materials and Approved Manufacturers for the various products specified in this MANUAL is included in Appendix 'D'. It is the intent of the CITY to periodically review and update Appendix 'D' as appropriate to ensure efficient operation of the services and facilities under the jurisdiction of this MANUAL.